

Course Unit	Database Management Systems		Field of study	Informatics	
Bachelor in	Public Management and Administration		School	School of Public Management, Communication and Tourism	
Academic Year	2023/2024	Year of study	2	Level	1-2
Type	Semestral	Semester	2	ECTS credits	6.0
			Code	9165-315-2205-00-23	
Workload (hours)	162	Contact hours	T -	TP 30	PL 30
			TC -	S -	E -
			OT 20	O -	

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Elisabete da Anunciacao Paulo Morais

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Acquiring the necessary knowledge to develop relational databases projects.
2. Using SQL (Structured Query Language) to perform queries to databases.
3. Accomplishing a proactive approach in relation to IS / IT, looking constantly update itself.

Prerequisites

Before the course unit the learner is expected to be able to:
Not applicable.

Course contents

Introduction to Databases; Relational Databases project; The SQL Language; Microsoft Access Database Management System.

Course contents (extended version)

1. Introduction to Databases
 - Generalities
 - Information Models
 - Specific Languages to Databases
 - Database Manager
 - Database Administrator
 - Database Users
 - Structure of a database management system
2. Relational Databases Project
3. The SQL Language
 - Introduction
 - Basic Structure
 - Operations between sets
 - Operations with multiple tables
 - Operations between an element and the set
 - Tuples of variables
 - Comparing data sets
 - Ordering of tuples
 - Aggregation Functions
 - Data manipulation (Insert , Update and Delete commands). Views.
4. Management System Database Microsoft Access.

Recommended reading

1. DAMAS, L. (2017). SQL. 14ª Edição Actualizada e Aumentada. FCA – Editora de Informática. ISBN 978-972-722-829-4.
2. Morais, E. P. (2024). Sebenta de Sistemas de Informação para a Gestão. EsACT.
3. Pereira, J. L. (1998). Tecnologia de Bases de Dados. (3ª ed.). FCA – Editora de Informática. ISBN 978-972-722-143-1. .
4. Silberschatz, A. ; Korth, H. ; Sudarsham, S. (2020). Database Systems Concepts. (7ª ed.). McGrawHill. ISBN: 978-126-008-450-4
5. Sousa, S. (2012). Domine a 110% Access 2010, FCA – Editora de Informática. ISBN 978-972-722-707-5.

Teaching and learning methods

This curriculum unit will be taught through theoretical and practical lessons (always with the theoretical framework and then examples / exercises), and, if necessary, can be a follow-up lessons to work.

Assessment methods

1. Final Evaluation - (Regular, Student Worker) (Final, Supplementary, Special)
 - Final Written Exam - 50% (Minimum score of 7 points.)
 - Practical Work - 50% (Minimum score of 7 points and mandatory work defence.)
2. Incoming and Outgoing students - (Regular, Student Worker) (Final, Supplementary, Special)
 - Practical Work - 100%

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

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27-02-2024	27-02-2024	28-02-2024	12-03-2024